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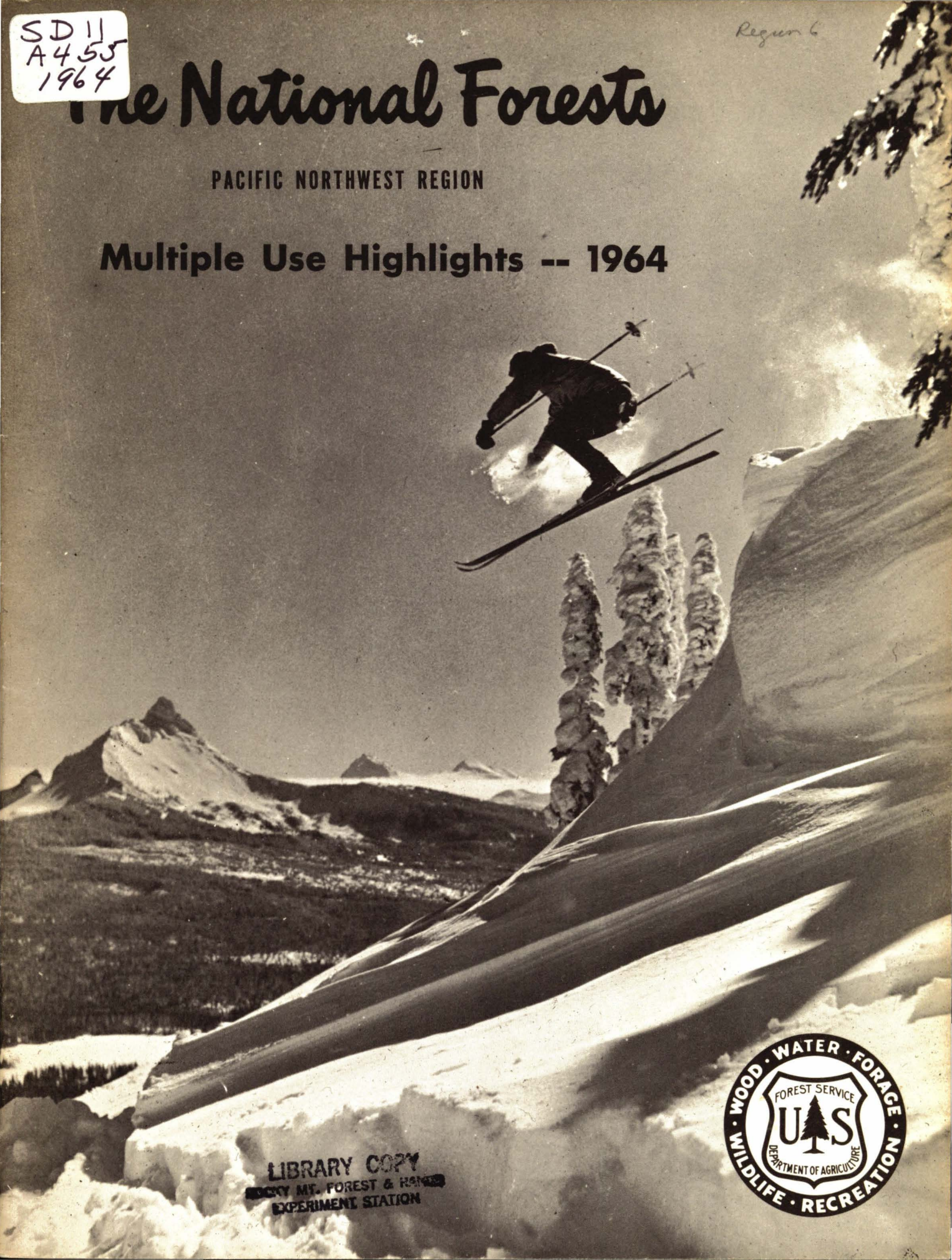
Region 6

The National Forests

PACIFIC NORTHWEST REGION

Multiple Use Highlights -- 1964



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ROCKY MT. FOREST & RANGE
EXPERIMENT STATION

WOOD · WATER · FORAGE · WILDLIFE · RECREATION

FOREST SERVICE
US
DEPARTMENT OF AGRICULTURE

Crooked River National Grassland — Three Sisters in Background

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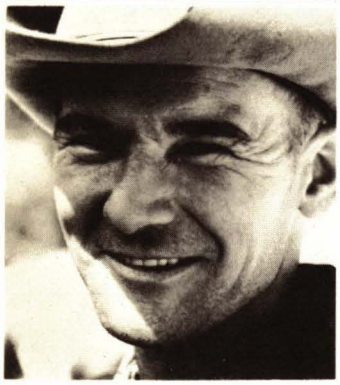
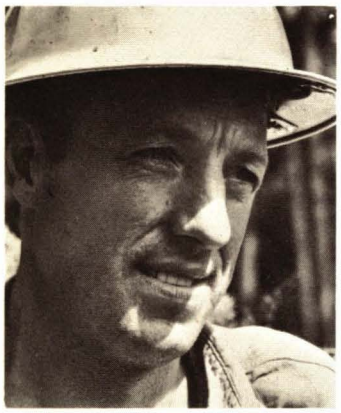
ROCKY MTN. REGION
FT. COLLINS, COLO.

Bachelor Butte
Deschutes National Forest



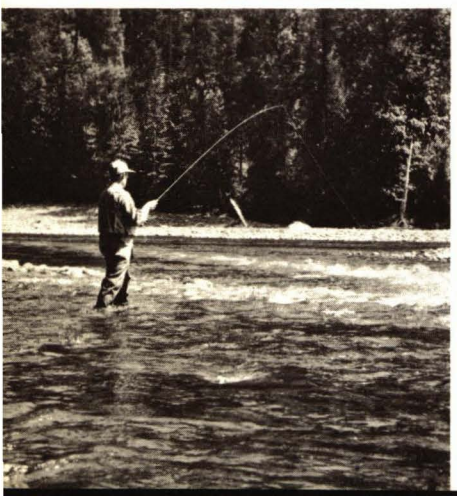
Cowboy
Okanogan National Forest

The Forest Service of the U. S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with the states and private forest owners, and management of the National Forests and National Grasslands, it strives — as directed by Congress — to provide increasingly greater service to a growing Nation.

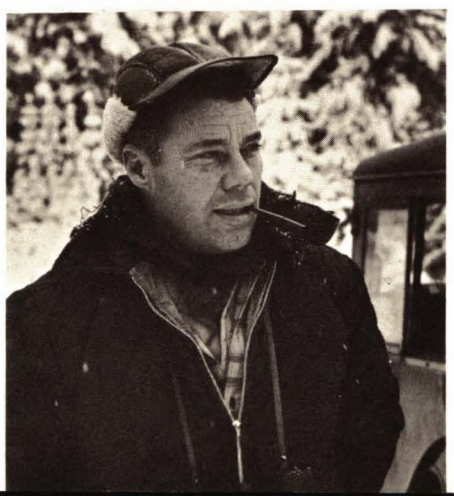


Logger
Siuslaw National Forest

Willamette River, North Fork
Willamette National Forest



Elk Hunter in Blue Mountains
Umatilla National Forest



Astronaut at McKenzie Pass
Willamette National Forest

The National Forests

Lands of many uses

THE MULTIPLE USE STORY -- 1964

Dear Friends:

We are pleased to give you an account of the year 1964 on the National Forests of the Pacific Northwest.

The first half of the year was marked by the final efforts in the sale of timber blown down in the October 1962 windstorm. By the middle of the year, practically all of the accessible blowdown timber had been placed under contract and most of it logged.

With the passage of the national anti-poverty legislation, we directed our thoughts to the construction, manning and operation of Job Corps Centers. This meant organizing and thinking in terms of helping to build men as well as resources. The two goals, however, fit together and we can improve the status of these men at the same time we improve the National Forest areas.

During the year we have made progress in our effort to develop and manage the habitat of wildlife under our multiple use program. We have given much thought to improving our productivity by developing methods to do things more effectively and economically. An example is our adoption of a broadscale aerial detection program to protect the Forests against fire.

We ended the year with one of the most devastating floods the Northwest had seen since 1861. The flood was sparked by an unusual combination of heavy snow pack, warm weather at high elevations, and heavy rains.

As we enter 1965, 60th anniversary year of the Forest Service, we are confidently moving ahead to rehabilitate the flood damaged resources and facilities, and keep the programs going. It is a never-ending task, but one full of challenge and interest.

J. Herbert Stone

J. HERBERT STONE
Regional Forester

NATIONAL FOREST SYSTEM — COOPERATIVE FORESTRY — FORESTRY RESEARCH
FOREST SERVICE — U S — DEPARTMENT OF AGRICULTURE

On Our Cover

An expert skier takes off from a cornice at Hoodoo Ski Bowl, Willamette National Forest, with Mount Washington and Three Sisters in the distance.

Photo by John Haney

All photography by the Forest Service, unless otherwise noted.

To Forest Service wildlife habitat specialists and many Forest users, the golden mantle squirrel, photographed here in the Blue Mountains, has just as much place in the forest community as the majestic elk.

The Forest Service's Role in Wildlife Habitat Management

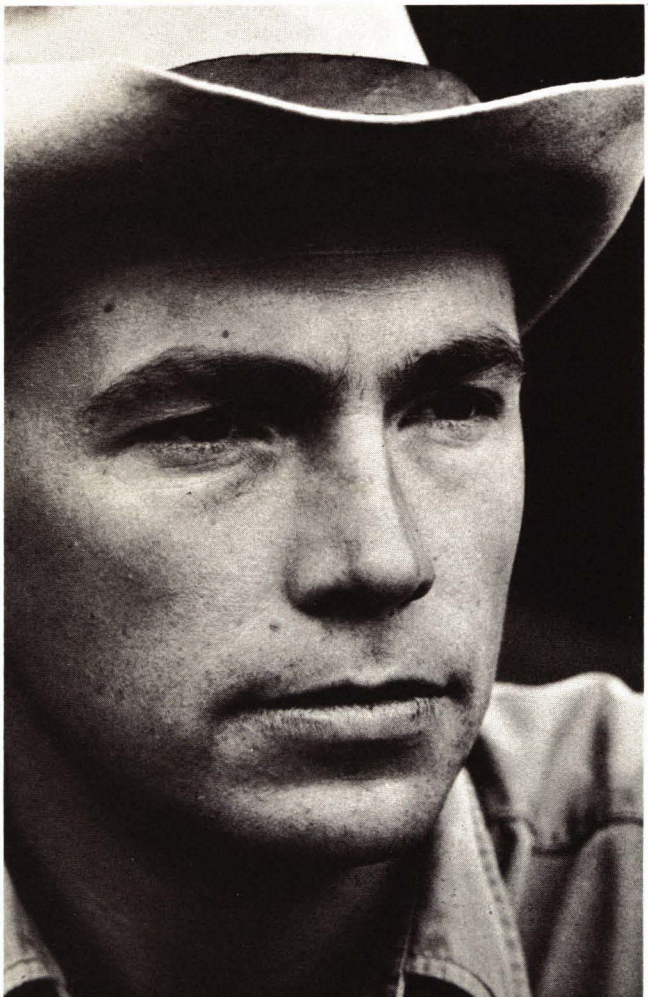
The bugle of the bull elk echoed across the canyon as Bernie Carter, wildlife specialist, U. S. Forest Service, scanned the area with his binoculars.

"There he is," said Carter. "And he looks like he's in good shape."

The condition of the majestic animal was important to Carter, for it reflected on the manner in which the Forest Servcie was managing the habitat for this particular elk and thousands of others that range the sharply etched ridges and canyons of the Blue Mountains.

Within a few weeks, the area would be teeming with a share of the more than one million hunters who visited National Forest lands in the Pacific Northwest during 1964 in quest of deer, elk, and other game. The presence of technicians such as Carter, experts in the field of wildlife habitat management, is a direct result of the growing hunter pressure on National Forest lands. The 1,135,200 hunter visits recorded on National Forests in Oregon and Washington in 1964 represented a 16 percent increase over 1963 figures.

Bernie Carter, 25, with both bachelor's and master's degrees in game management, is typical of the Forest Service's professionally trained wildlife habitat specialists.



By law and joint agreement, state game commissions are responsible for management and protection of the wild game, while the Forest Service is responsible for management of the habitat on National Forest lands. Employment of Forest Service wildlife specialists is intended to help the Forest Service more effectively carry out its wildlife responsibilities in cooperation with the state game departments.

Carter is one of the 20 to 25 professionals within the Pacific Northwest Region who have wildlife habitat management as their primary duty. All of them are college graduates in wildlife biology, and many have earned advanced degrees.

Carter is a wildlife specialist on the Walla Walla Ranger District of the Umatilla National Forest. His territory covers important big game areas in both Oregon and Washington. He has bachelor's and master's degrees in game management from Oregon State University. He represents a professional discipline still relatively new to the Forest Service, although wildlife has been recognized for years as one of the major resources of the Forest.

As an expert in his field, Carter's primary duties are to assist and advise Forest Service personnel in the technical phases of wildlife habitat management. This includes studies of habitat areas to determine forage production and its use by game animals and other wildlife. He plans and directs browse or grass seeding projects to bolster forage production. He is watchful for ways and means to effectively coordinate wildlife resources with other resource uses and values.

Possibly most important, the Forest Service wildlife specialist works in direct liaison with his counterparts from the state game departments of Oregon and Washington, insuring that wildlife habitat management programs are compatible with the management goals of the game agencies.

Thousands of hunters are attracted to the Blue Mountains each season in quest of prizes such as this seven-point Rocky Mountain elk.

During a field trip in the Table Rock area of the Blue Mountains, Carter and Dr. Helmut Buechner, professor of zoology at Washington State University, observe an elk herd. Dr. Buechner has made extensive studies of the elk habitat in the Blue Mountains.

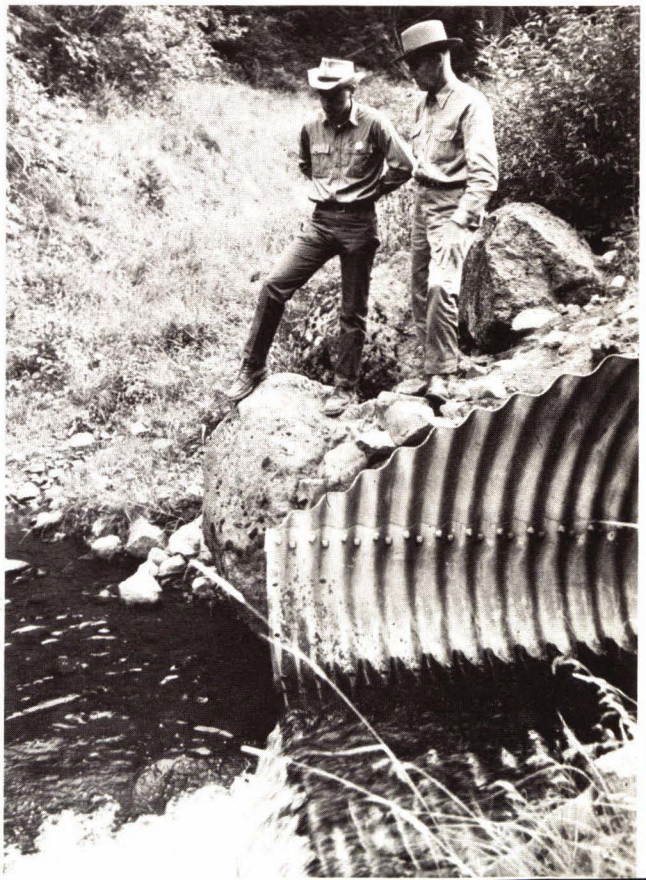
Providing a sight that would quicken the pulse of any hunter, three mule deer bucks break over a ridge in the Blue Mountains of the Umatilla National Forest. Bernie Carter is a wildlife habitat specialist on the Umatilla's Walla Walla Ranger District, which embraces major big game areas in both Oregon and Washington.

State-Federal Cooperation Vital in Wildlife Role

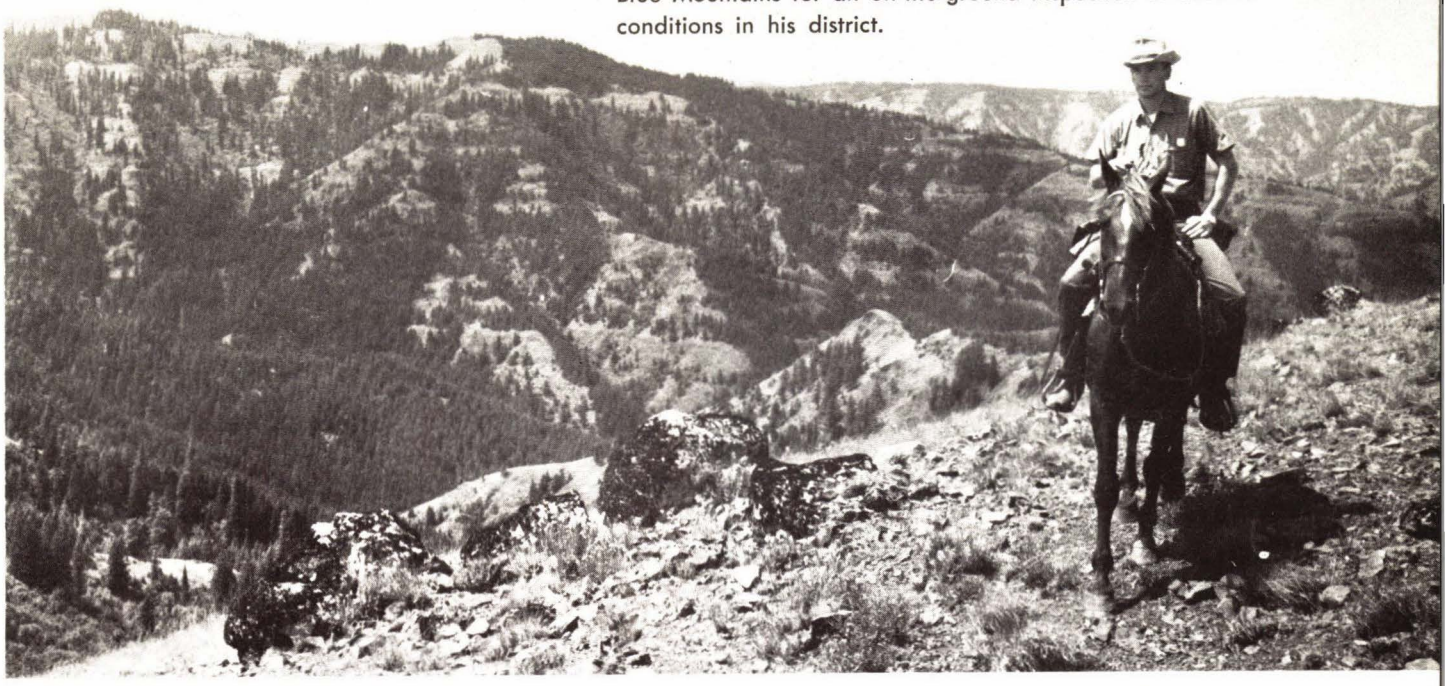
Bernie Carter, as a Forest specialist in wildlife habitat, works closely with his counterparts from the Oregon and Washington State Game Departments. He discusses hunting pressure in the Blue Mountains with Jack E. Kirkendall, Washington State Game Department District Supervisor at Walla Walla.

Carter and Officer Doyle Watson, Oregon State Police game law enforcement, visit with one of the more than one million hunters who utilized National Forest lands in Oregon and Washington during 1964.

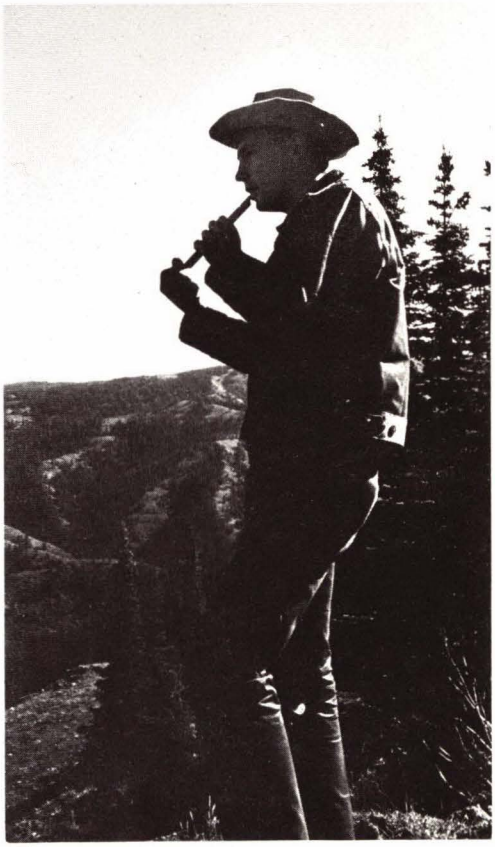
Protection of fisheries is also a matter of concern for Forest Service wildlife habitat specialists. Carter and John E. Schwartz, below, chief of the Region's wildlife branch, discuss ways of improving this Forest road culvert to allow easier passage of migratory fish.



Carter rides horseback along the high ridges of the Blue Mountains for an on-the-ground inspection of browse conditions in his district.

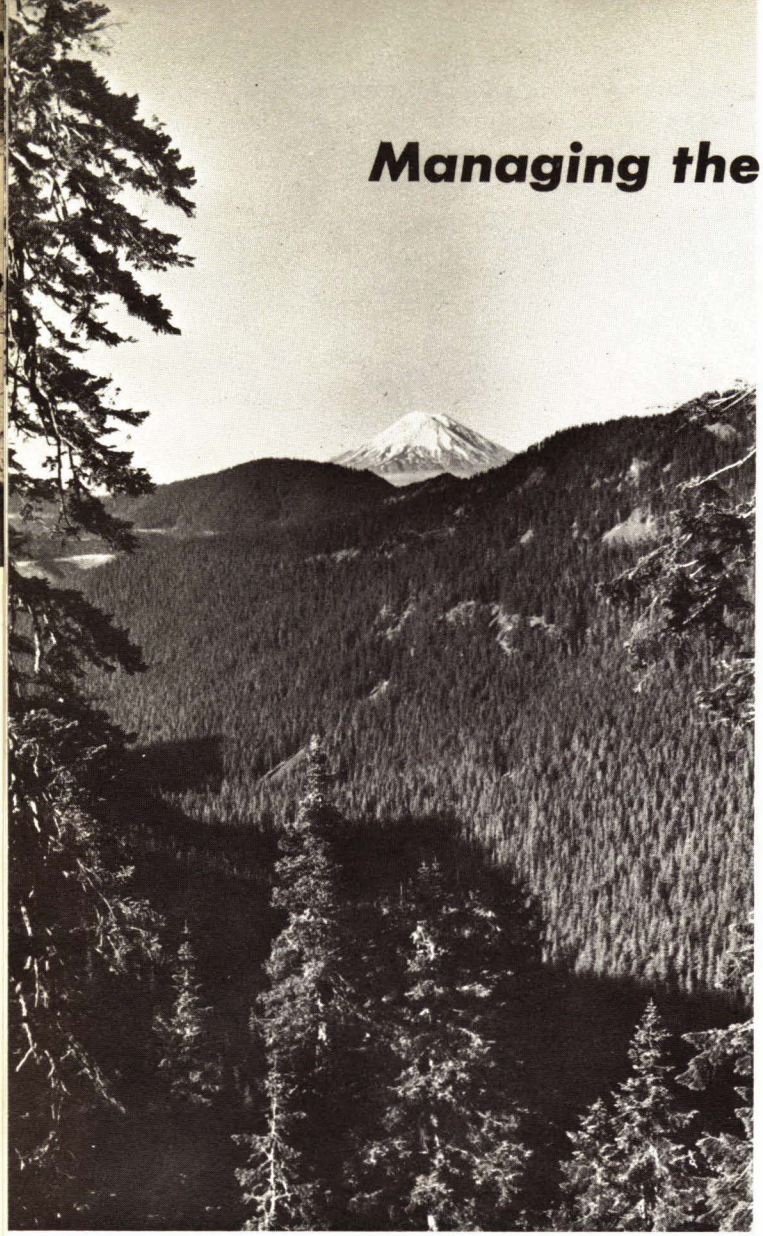


Carter carefully weighs grass clippings taken from a sample plot to determine forage production and usage in a particular area.



Silhouetted against the sky as dawn breaks over the Blue Mountains, Carter uses a home-made whistle to call a bull elk out of the timber so that he can check the animal's condition.

Managing the Timber Resource



Old growth timber on the Gifford Pinchot National Forest, with Mount St. Helens on the horizon.

For the third straight year, a record breaking volume of timber was harvested from the National Forests in Oregon and Washington in 1964.

The new all-time high in timber harvest for the Region was 5.02 billion board feet, valued at $91.8 million, compared with previous record highs of 4.7 billion board feet in 1963, and 4.4 billion board feet in 1962.

As 1964 ended, most of the 2 billion board feet of National Forest timber blown down during the 1962 Columbus Day storm had been logged, and practically all of the blowdown in accessible areas had been sold. This virtually completed a monumental salvage effort.

Remindful of the havoc wrought by Typhoon Frieda, the floods of Christmas week, 1964, brought further catastrophe to Pacific Northwest National Forests. (The story is told in words and pictures starting on Pages 14-15.)

A total of 4.3 billion board feet, valued at $104.5 million, was auctioned from the Pacific Northwest National Forests in 1964. This was down from the record 6.1 billion board feet auctioned in 1963 for $105.8 million, but 1963 was the biggest year of the massive timber salvage sale effort following the 1962 windstorm. The annual allowable cut for the Region is 4.281 billion board feet.

Reforestation Progress

Regionwide reforestation programs in the 1963-64 season accomplished the planting of 51,960 acres with 22 million trees. The seedlings were largely produced at the Forest Service's Wind River and Bend nurseries, augmented by trees raised for the National Forests under contract at Oregon and Washington state forest nurseries.

Another 11,814 acres were reforested by direct application of 10,616 pounds of tree seed.

Timber stand improvement by thinning, brush spraying, or pruning involved 37,881 acres of National Forest land in the Pacific Northwest Region during the year.

National Forest Timber Cut and Sold
Pacific Northwest Region, 1963-1964

		Volume, Board Feet	Value
Harvested	1964 —	5,021,415,000	$91,871,824
	1963 —	4,704,642,000	$84,334,316
Sold	1964 —	4,351,960,000	$104,545,898
	1963 —	6,106,965,000	$105,855,059

Blister Rust Control

Progress continued on a Regionwide effort to save western white and sugar pine from blister rust, an Asiatic tree disease introduced to the Northwest some 40 years ago.

Goal of the program, launched in 1958, is to develop disease-resistant strains of white and sugar pine species. More than 400 resistant trees have been located. Foresters place pollination bags over the flower buds of selected trees, then spray the flowers with pollen from other resistant trees. Progenies of the controlled breeding are artificially inoculated with the blister rust disease.

Eventually, foresters hope to mass produce seedlings with built-in resistance to the disease which has been viewed for years as a threat to the very existence of susceptible pine species.

Meeting the Insect Threat

A possibility of extensive tree killing by Douglas-fir bark beetles was a matter of grave concern following the 1962 Columbus Day storm. The threats began to materialize in 1964. Moderate to severe beetle outbreaks were reported in several blowdown areas. Surveys detected beetle infestations extending from the Alsea River southward to the Umpqua River drainages in the Coast Range of Oregon.

An estimated one-half billion board feet of high quality mature Douglas-fir timber had been killed by the beetle, and more is threatened in 1965. Prompt harvesting of beetle-infested trees is an essential step in holding future losses to a minimum.

On another front in the continual war against timber killer insects, a major infestation of Douglas-fir tussock moth was discovered on the Malheur and Ochoco National Forests in Oregon, largely in the Burns area.

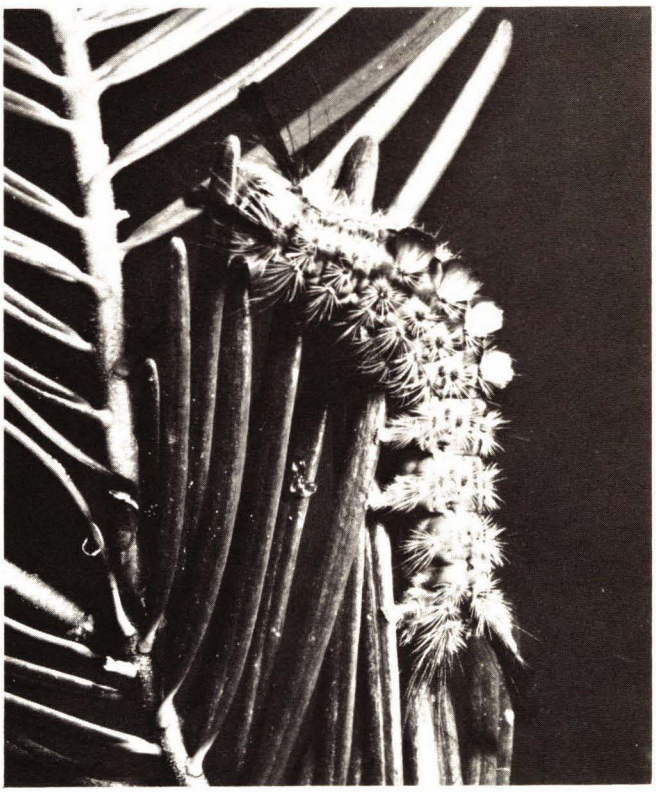
The voracious larvae of the tussock moth kill Douglas-fir, white fir and other conifers by eating their needles.

Forest Service entomologists predict a tussock moth population explosion in 1965 with widespread tree mortality, unless control measures are undertaken on an estimated 55,280 acres of National Forest land.

Plans are being developed for an aerial spray project, utilizing helicopters for precision application of insect controllants, to be carried out in the spring of 1965 if surveys continue to show that control would be necessary.

As was the case with the 1963 Willapa Bay hemlock looper control project in southwest Washington, the Burns project would be monitored by a surveillance committee composed of representatives from all interested agencies. The committee would determine and evaluate any side effects on public health, water, soils, and wildlife in the proposed spray area.

Wayne Miller of the Willamette National Forest uses a hypodermic needle to inject pollen into a bag covering female flowers of a white pine in Linn County. This is one of the steps in a program to develop pines resistant to blister rust.



Enlarged closeup shows a mature larva from the tussock moth, a forest killer threatening thousands of acres of timber on the Malheur and Ochoco National Forests in Oregon.

Clear Creek Dam, a quarter of a million dollar reconstruction project in the Tieton Ranger District of the Snoqualmie National Forest, was one of the major improvements accomplished in the Region during 1964.

Transportation and Other Improvements

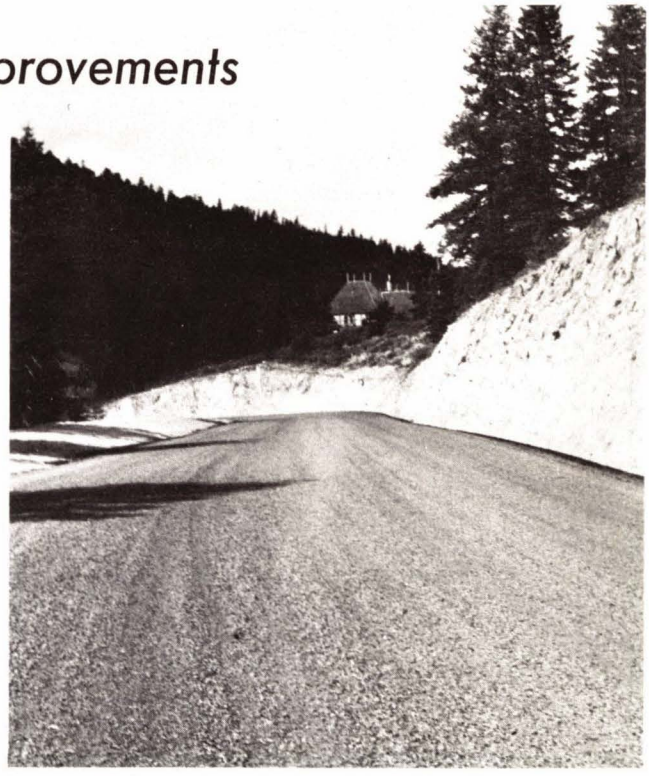
National Forests in Oregon and Washington have an extensive transportation system totalling 34,027 miles of road and 16,326 miles of trail. The network is growing and improving yearly.

In 1964, a total investment value of $44.5 million, both in appropriated funds and by purchasers of National Forest timber, resulted in:

Construction of 1,398 miles of new road . . .
Reconstruction of 544 miles of existing road . . .
Bituminous pavement applied to 51 miles of road . . .
Reconstruction of 130 miles of trail . . .
Construction of 43 permanent bridges.

One of the major road projects saw completion of the 8.2-mile Mount Ashland Road, leading to the Rogue River National Forest's popular new ski area (Page 13), at a total contract cost of $651,000. This road, providing for development of an important and attractive recreation resource, is an example of construction financed by funds appropriated from timber sale receipts derived from O&C lands administered by the Forest Service.

Two important projects under the Forest Highway System were completed in Oregon in 1964. On the Umpqua National Forest, 55 miles of the North Umpqua Highway was completed from Rock Creek, 22 miles northeast of



The 8.2-mile Mount Ashland Road was completed in 1964 at a cost of $651,000. It provides improved access to the new Mount Ashland Ski Area on the Rogue River National Forest.

Roseburg, easterly to a junction with the Cascade Lakes Highway, 14 miles north of Crater Lake. The cost totalled $10.8 million. This new highway sustained major damage during the floods of Christmas week, 1964.

The Lake of the Woods Highway was completed on the Rogue River National Forest for 28 miles, from a point 25 miles east of Eagle Point easterly to a junction 20 miles northwest of Klamath Falls, at a total cost of $2.6 million.

Programs for the use of Forest Highway funds, amounting to $6.5 million annually in Oregon and Washington, are developed by joint agreement with the Oregon and Washington highway commissions, the Bureau of Public Roads, and the Forest Service. Design and construction is the responsibility of the BPR, subject to review by the Forest Service for coordination with National Forest resource values.

Another major improvement, reconstruction of Clear Creek Dam on the Snoqualmie National Forest, was completed in 1964 at a total cost of $256,800. The Clear Creek reservoir has supplemental irrigation value to Yakima Valley water users, and is a heavily used fishing and boating lake. For several years, deterioration of concrete in the 46-year-old structure made it necessary to hold the water level several feet below the full capacity of the reservoir.

Reconstruction of the dam, including spillway repairs, a new spillway bridge and removal of stumps from the margins of the reservoir, was financed by an Accelerated Public Works allocation. The Bureau of Reclamation designed the reconstruction work and provided resident supervision under a contract administered by the Forest Service.

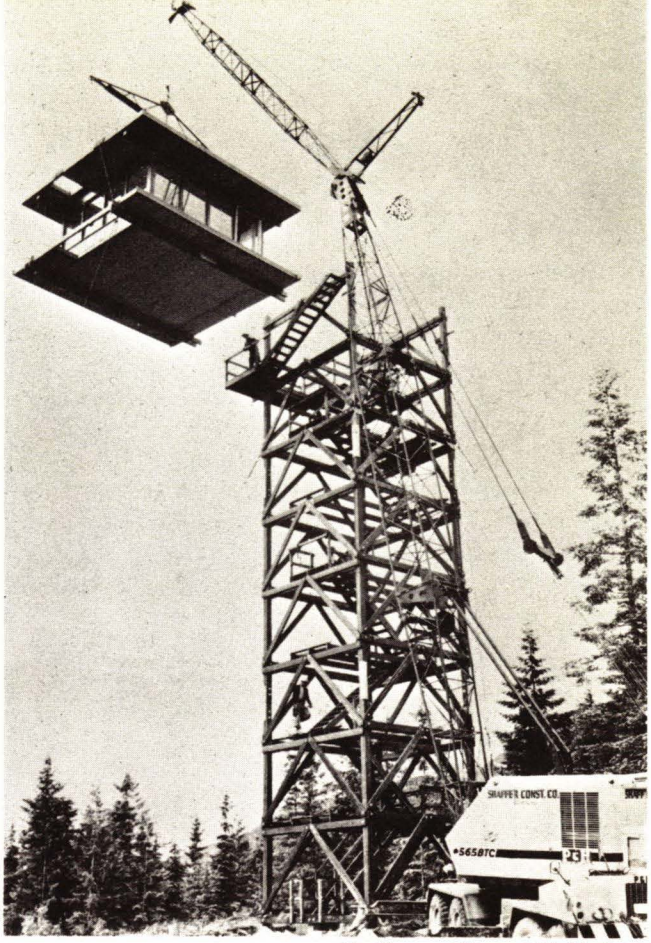
Land Adjustments

Some 2.8 million acres of state and private lands are intermingled with public lands within the Region's National Forest boundaries. In many cases, the broken land ownership pattern creates management problems and increases administrative costs for adjoining owners.

Frequently, the values of such lands can be increased for the respective owners if exchanges are worked out to block up ownerships into more manageable units.

During 1964, the Region worked on 73 active land exchange cases. Four exchanges were completed for the trade of 4,330 acres of National Forest land for 5,365 acres of land owned by private owners or local governments.

In addition, agreement was reached with owners on 11 similar exchanges for 11,396 acres of National Forest lands to be traded for 13,399 acres of private and state lands.



Tye Hagman, Monroe, Washington

Although a number of Forest Service lookouts are being discontinued in favor of aerial patrol (see Page 22), there will probably always be a need for lookouts on some key areas. This experimental lookout tower was erected in 1964 at the Heybrook site near Index on the Snoqualmie National Forest. The tower is a modification of the pressure-treated timber design used in the Region for the last 30 years. The lookout house uses plywood stress-skin panel construction for floors, walls and roof, with a protective neoprene-hypalon coating instead of ordinary paint.

Multiple use and sustained yield of National Forest land and its resources require permanent road access, and it is frequently necessary to acquire road right-of-way easements across non-federal lands. During 1964, 206 new easements were negotiated for land right-of-way, and 172 easements were acquired for existing roads. Title was also approved on 187 old right-of-way acquisitions.

During the year, negotiations were underway on 32 new share-cost road agreements between the Forest Service and private timber land owners. When completed, roads covered by these agreements will provide access to some 16 billion board feet of private and public timber. Over the years, nearly 1,000 miles of road have been built in the Region under share-cost agreements, making 35 billion board feet of timber available for harvest.

Against a backdrop of timbered slopes, cattle are counted onto a summer grazing area of the Okanogan National Forest in north-central Washington.

Grazing Important on National Forests

Grazing is an important and historical use of the National Forest lands in the Pacific Northwest.

In 1964, a total of 116,105 cattle and horses, and 97,074 head of sheep grazed on 6.5 million acres of grazing land within the 20 National Forests and one National Grassland in Oregon and Washington.

Grazing fees paid by 1,240 ranchers and farmers in the Region returned $258,757 to the treasury in fiscal year 1964.

A 10-year program for analyzing ranges and bringing management plans up to date on each of 805 grazing allotments continued during 1964, bringing the project to 80 percent of completion. Application of analysis findings, with the cooperation of permittees, has resulted in improved management practices and better resource condition on many allotments.

Range experts are also turning their attention to the increasing amount of grozing in back country areas by recreationists' saddle and pack stock. Forage conditions and trends in these areas are being determined, and grazing use is being coordinated with recreational plans.

National Forest Range Improvements
Pacific Northwest Region, 1964

New water developments	303
New range fence construction	299 miles
New stock driveways (removal of brush, other obstructions, to facilitate cattle movement)	33 miles
Brush sprayed	15,413 acres
Reseeded with forage grasses	12,676 acres

Progressive Ranch Now 'Herderless'

"Fifty years ago you could stick your head in the ground — but not today."

George Rugg, president of the Oregon Wool Growers Association, meant no disrespect to his predecessors in the livestock business by the statement.

Rather, he was summing up the attitude of progressive ranchers such as himself — executives who must constantly be alert for ways and means of improving the efficiency of their operations, and cutting costs wherever possible.

It has become a matter of economic survival.

Rugg and his wife, Shirley, operate a 4,000-head sheep ranching business utilizing some 160,000 acres, mostly in Morrow County, Oregon. Their operation depends heavily on a grazing allotment in the Heppner Ranger District of the Umatilla National Forest.

With the cooperation and encouragement of the Forest Service, they have implemented a plan which is being watched with interest by the sheep industry and range managers.

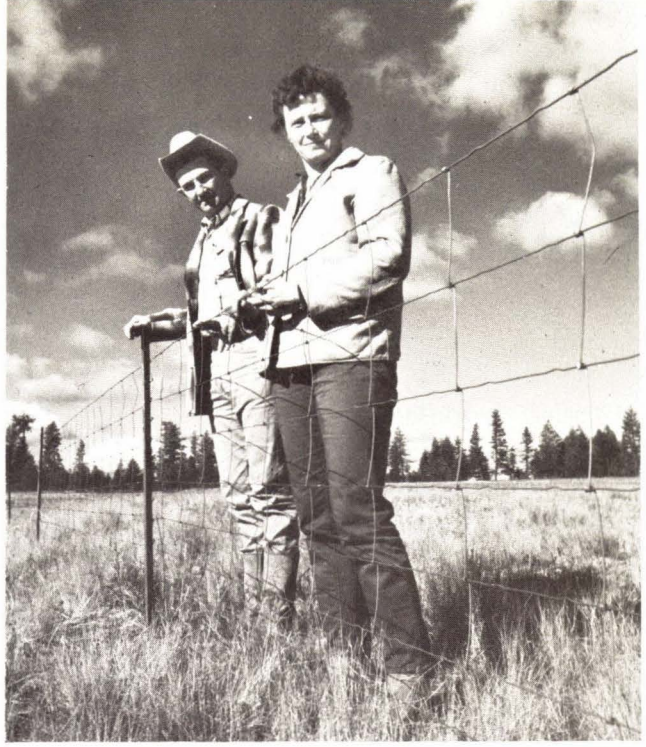
The essential element in their program is fencing — 170 miles in all —sheep-tight, woven wire, stretching through timber, across open meadows, up and down canyon sides, and over rocky ridges. It includes 52 miles on National Forest alone, constructed cooperatively with the Forest Service on a 50-50 basis to enclose and cross-fence 32,800 acres.

As a result, the Ruggs have been able to reduce their labor force from six sheepherders (at $300 per month each) and one camp tender, to a present day force of one camp tender and two men who aren't called herders anymore, but are "range-riders".

The herderless operation has enabled the Ruggs not only to cut their labor costs substantially, but they also point to weight gain advantages for their animals, a higher proportion of lambs in the fat class, and increased wool production.

Left to move about by themselves, the sheep have the capability of making the most of the forage available. Under the herderless operation they move about in groups of 15 to 20, instead of concentrating in large herds. The result is not only beneficial to the sheep, but also to the vegetation and soil cover, Forest Service range managers have found.

Rugg patterned his operation after that of a North Dakota sheepman, and made improvisions to suit his own situation. There is one other herderless operation in the Pacific Northwest Region, that of Danny O'Connor, on the Fremont National Forest. He and Forest Service officials there share enthusiasm for the plan.



Sheep Ranchers George and Shirley Rugg have banked the future of their operation on 170 miles of sheep-tight fencing such as this, which has enabled them to cut their operating costs substantially.

The threat of animal loss to predators was a major concern to the Ruggs when they started their herderless operation. But so far, predators have not been a problem. In fact, they have lost fewer animals to predators than when herders were used. Rugg credits this to the fact that when sheep are not grouped tightly together, they are in a better position to defend themselves or get away. They aren't so apt to be bunched into a corner where they can be destroyed at will by marauding coyotes and other animals of prey.

Under their herderless operation, the George Ruggs report their sheep gain more weight, produce more wool, and so far, predators have not proven to be a problem. It is unusual to see this many sheep banded together in the fenced areas. Usually, the groups are no larger than 15 to 20 animals.

Young recreationists plan their day's activities at Spirit Lake on the Gifford Pinchot National Forest.

Recreational Use at New High On Northwest National Forests

People — enjoying their Forests.

This was apparent more than ever before in 1964, as a record 13.4 million recreational visits were counted on the National Forests in Oregon and Washington.

The most popular activities of recreationists were in the categories of general enjoyment-sightseeing, and camping-picnicking. However, the largest percentage gains were in winter sports, hiking and wilderness travel, hunting, organized camping, and fishing.

It all added up to a 12 percent increase over the 1963 recreational visits.

Winter sports continued to grow in popularity with a record 1.6 million visits, mostly by skiers. Prosperity and business optimism prevailed during 1964 at most resorts and winter sports areas operated under permits on National Forest land. Improvement programs were launched at many of the areas. Forest Service architects, landscape architects, and engineers reviewed design and construction plans submitted by permittees for 25 major structures and numerous smaller improvements associated with concessionaire operations. The prospective improvements were valued at more than $3 million.

Mount Jefferson looms above a pastoral scene of horsemen refreshing their mounts at Russell Lake in the Mount Jefferson Primitive Area, Willamette National Forest.

Visitors to the Gifford Pinchot National Forest enjoy sailboating on Spirit Lake, near Fujiyama-like Mount St. Helens.

Among the more extensive projects, the Forest Service approved construction of public service "village" complexes at Crystal Mountain and White Pass, both on the Snoqualmie National Forest.

Three more $1-per-night charge campgrounds were added in the Region for the 1964 season, for a total of 29. This program returned nearly $40,000 to the treasury in 1964, compared with $23,000 in 1963. The Umpqua National Forest's Diamond Lake Campground, largest in the Region, operated under concessionaire management for the last time in 1964. Beginning with the 1965 season, it will again be operated by the Forest Service, this time as a charge facility.

Passage of the Land and Water Conservation Fund by Congress in 1964 will mean changes for visitors to many National Forest recreation sites in the future. Although details were not firm at this writing, the new legislation will provide for a user-fee system.

Visitors may expect to see more effective enforcement of rules and regulations governing conduct of Forest users in the future. Passage of the 1964 Commissioners Act by Congress makes it possible for U. S. Commissioners — federal justices of the peace — to try offenses such as violation of closures of trails to motor vehicles, exceeding stay limits in campgrounds, and breaking ordinary rules of decent conduct at recreation sites. Formerly, such offenses had to be tried before U. S. District Courts. Crowded court dockets and the minor nature of such offenses made it all but impossible to prosecute such violations. The first two cases brought before U. S. Commissioners in Oregon and Washington under the new law resulted in a conviction in one case, and forfeiture of bail in the other. Both cases involved motor vehicle trespass into classified wilderness areas.

Wilderness Act Hailed

A 40-year period of wilderness protection pioneered by the Forest Service was culminated September 3, 1964, when President Johnson signed the Wilderness Act into law.

"The Wilderness Bill," said President Johnson upon signing it, "preserves for our posterity, for all time to come, 9 million acres of this vast continent in their original and unchanging beauty and wonder."

The law established within the United States a permanent National Wilderness Preservation System currently comprised of 9.1 million acres, all of which has been previously classified as Wild or Wilderness area in the National Forests, mostly in the West. The Act lays down the rules for adding other lands later, such as the existing National Forest primitive areas, and roadless areas now within National Parks, National Wildlife Refuges and Game Ranges.

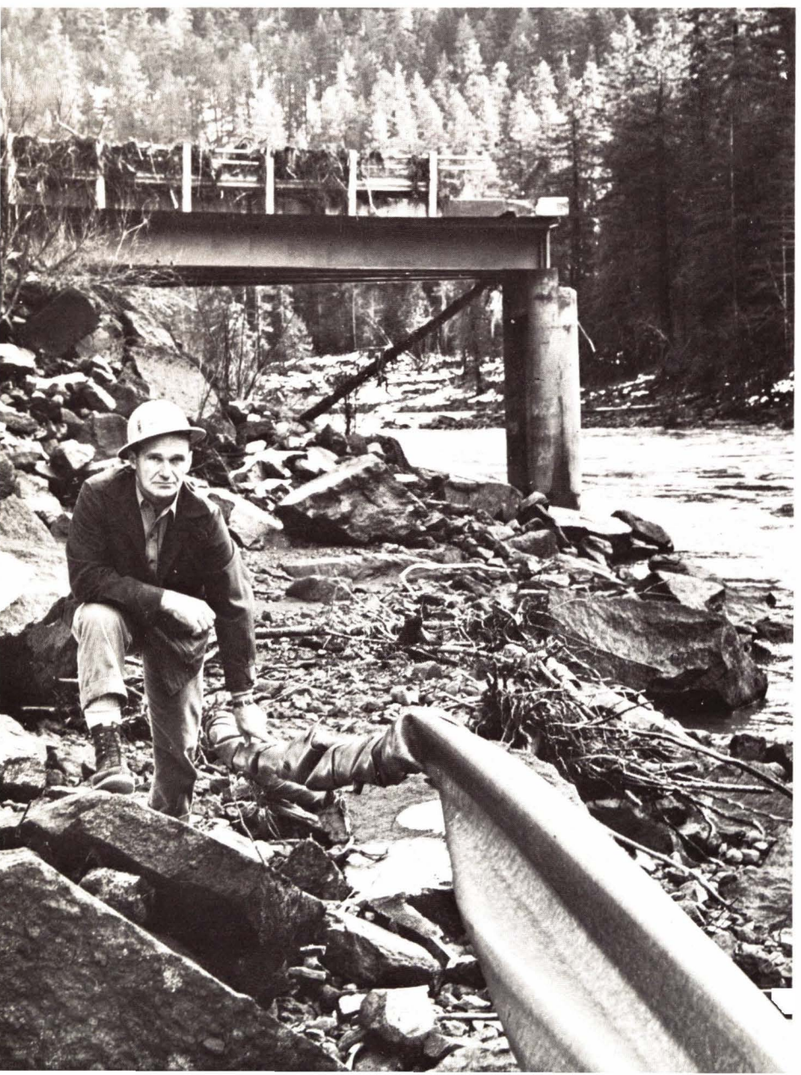
A big share of the area encompassed initially by the Wilderness Act is on National Forests in the Pacific Northwest Region — with 662,847 acres in Oregon, and 583,196 acres in Washington, totalling 1,246,043 acres.

Under terms of the act, consideration will be given during the next 10 years to including National Forest primitive areas in the Wilderness Preservation System. In Region 6, this would involve 887,700 acres, most of which — 801,000 acres — is in Washington.

National Forests Hit by Flood Disaster

Like a tombstone, a 1964 dateplate on the remains of a brand new Forest bridge is symbolic of the destruction in the 1964 Christmas week flood. The bridge was never used.

A piece of heavy-gauge steel guardrail torn from the Blitzen Bridge was twisted grotesquely like a tin winding band from a peanut can by the irresistible force of the rampaging North Umpqua River. An Umpqua Forest officer, Elmo Picht, inspects the damage.



It began with the snow that piled up to great depths along the mountains of the Pacific Northwest in early December.

And then the rains came — warm torrents of water that quickly melted the snowpack and turned normally docile streams into raging rivers; and rivers became irresistible forces of destruction.

The result was one of the worst disasters in the history of the West — the flood of Christmas week, 1964.

When it was over, 42 lives had been claimed over a five-state area, and damage estimates ran up to a billion dollars.

It was a devastating blow to Northwest Forests — something akin to the catastrophic 1962 Columbus Day windstorm, only many felt the flood was far worse.

Damages to Pacific Northwest Forests were estimated at $14.5 million, almost all confined to Forests in Oregon. Hardest hit were the Mount Hood, Willamette, Umpqua, and Siskiyou.

Most of the destruction, an estimated $12.2 million, was to road and trail systems. A total of 126 road and trail bridges were damaged or destroyed. Damages to administrative, recreational, range and wildlife improvements, and soil and watersheds, exceeded $2 million.

With critical log shortages threatened because of shattered access road systems, a massive emergency repair program was launched. Timber sales, previously programmed but made inaccessible, were rescheduled for areas that could be reached or would soon become accessible.

As the Forests moved to pick up the pieces, an on-the-ground analysis of flood damage was begun to:

1. Determine the relationship between various types of soil movement and management practices, and
2. Develop information necessary to modify or develop new logging and roadbuilding practices which will minimize soil movement during periods when soils become saturated.

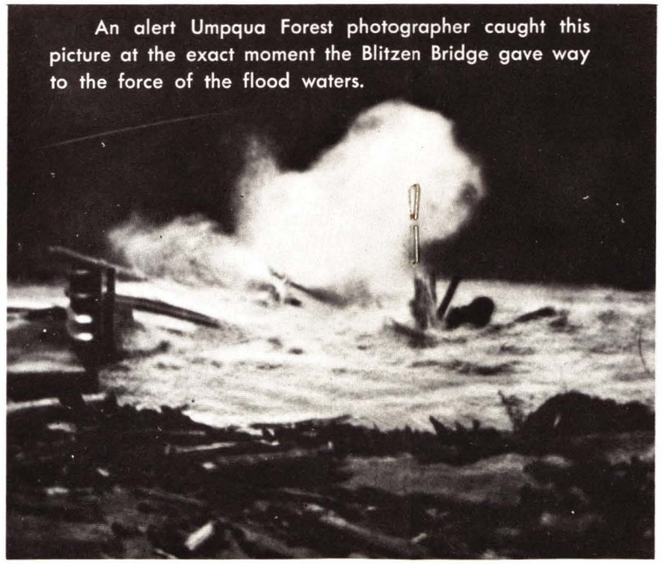
Findings of researchers indicate logging practices were not an important factor in flood severity. Results of research over a 10-year period on logged and unlogged watersheds located on the H. J. Andrews Experimental Forest near Blue River, Oregon, reveal that the construction of timber access roads and logging according to Forest Service standards does not cause an increase in peak streamflow.

Instead, it was an awesome combination of heavy snowpacks, warm temperatures, and torrential rains that caused the disaster, one of the worst in the history of the West.

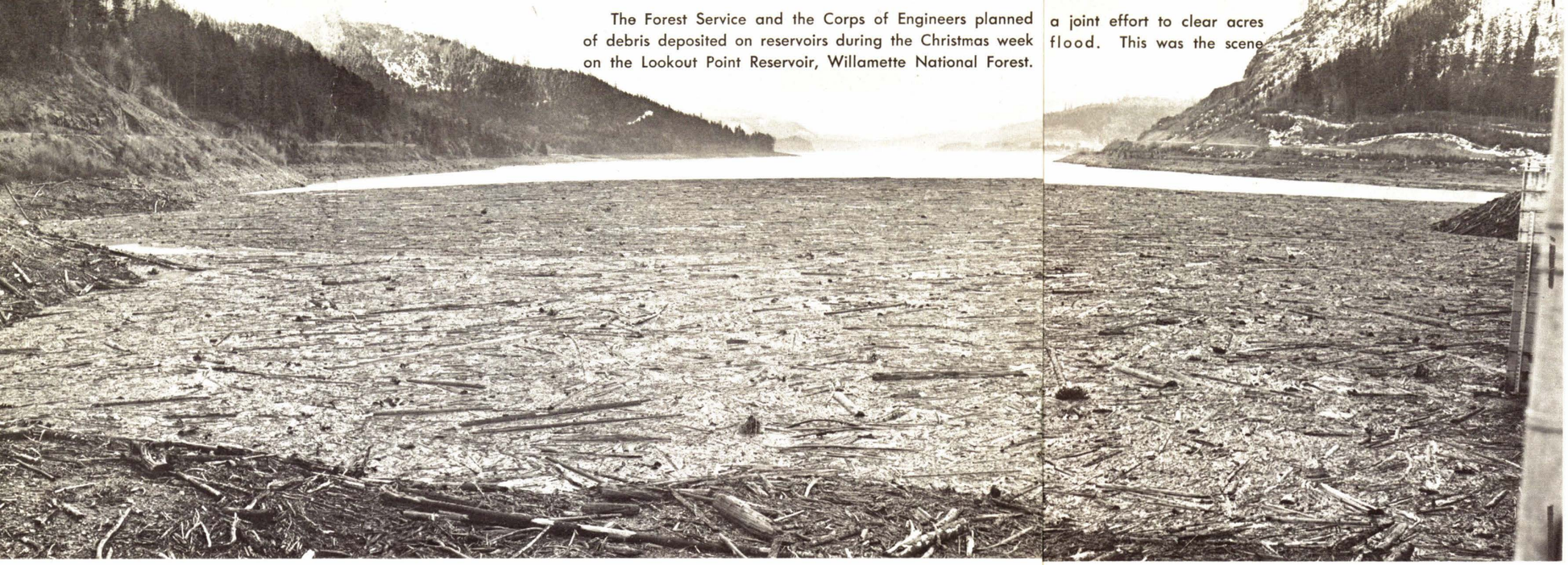
A bulldozer cleans up around the toppled Squaw Butte Bridge over Salmon Creek on the Willamette National Forest. The bridge was rammed by debris until the creek washed out the approach and overturned the structure. Battering-ram force of the debris carried by the flood waters is evidenced by the cracked concrete along the upstream side.

The newly completed North Umpqua River highway sustained heavy damage in many areas of the Umpqua National Forest, as was the case in this scene. Large pieces of asphalt pavement lie amongst the rubble.

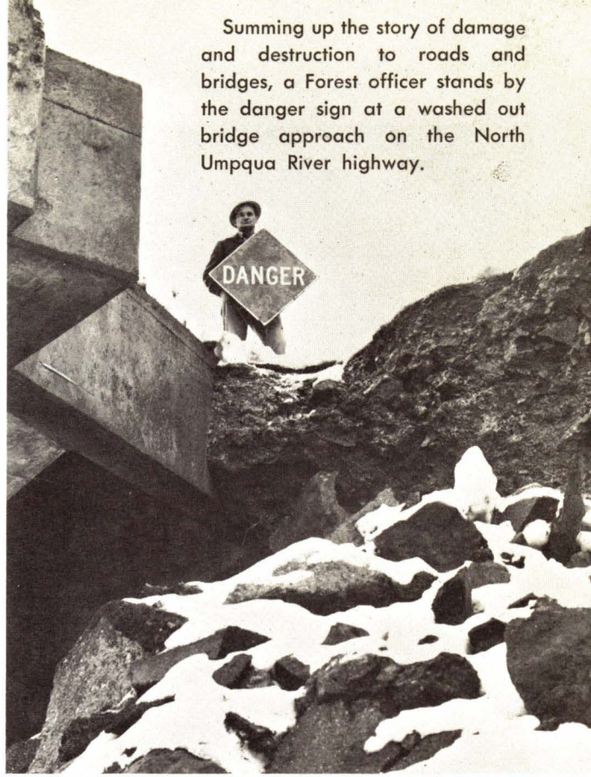
An alert Umpqua Forest photographer caught this picture at the exact moment the Blitzen Bridge gave way to the force of the flood waters.



The Forest Service and the Corps of Engineers planned a joint effort to clear acres of debris deposited on reservoirs during the Christmas week flood. This was the scene on the Lookout Point Reservoir, Willamette National Forest.



Summing up the story of damage and destruction to roads and bridges, a Forest officer stands by the danger sign at a washed out bridge approach on the North Umpqua River highway.



A local resident is ferried to safety across the Zigzag River in an improvised bosun's chair during the height of the flood. Forest Service people were busy assisting persons and families hit by the flood.

A bathtub is perched precariously in the wreckage of a summer home swept away by flooding Still Creek on the Mount Hood National Forest. Several National Forest summer home areas sustained major damage.

It will be months before the complete flood impact on National Forest campground can be assessed, but some of the damage was readily apparent, as in this scene on the Mount Hood National Forest. The Zigzag River surged out of its channel and carried away the picnic area and part of the camping area at popular Tollgate Campground.

Al Parker, Farm Forester

Farm Forester Al Parker discusses ACP forestry applications with Jay A. Wescott, Jr., manager of the Clackamas County office of Agricultural Stabilization and Conservation Service.

Rural Economy, Multiple Use, And the Farm Forester

A woodland owner needs some cash and wants to cut his timber. A farmer wants to get into the Christmas tree business to increase his income. Another landowner wants financial help through the Agricultural Conservation Program (ACP) to get started in tree farming.

The best advice to these landowners is "see your Farm Forester".

Farm foresters — men like Al Parker — are an important part of the rural economy. Their services often put money into the pockets of small woodland owners.

Farm Forestry is one of the programs in which the Forest Service cooperates with state forestry departments. The programs are designed to encourage multiple use on private lands, and to aid rural economy.

Al Parker's work is typical of services performed by Farm Foresters throughout the nation. He is a member of the State of Oregon Forestry Department. His salary is paid jointly by the State of Oregon and the U. S. Forest Service.

Parker graduated in forestry from Oregon State University in 1927. He worked for the U. S. Forest Service in California from 1927 until 1945, when he was appointed Forest Service Farm Forester for Clackamas and Multnomah Counties. In 1947, the supervision of the Farm Forestry Program was transferred to the state. Parker transferred to the State Forestry Department to stay with the work he enjoyed. He has served the same area longer than any other Farm Forester in the country.

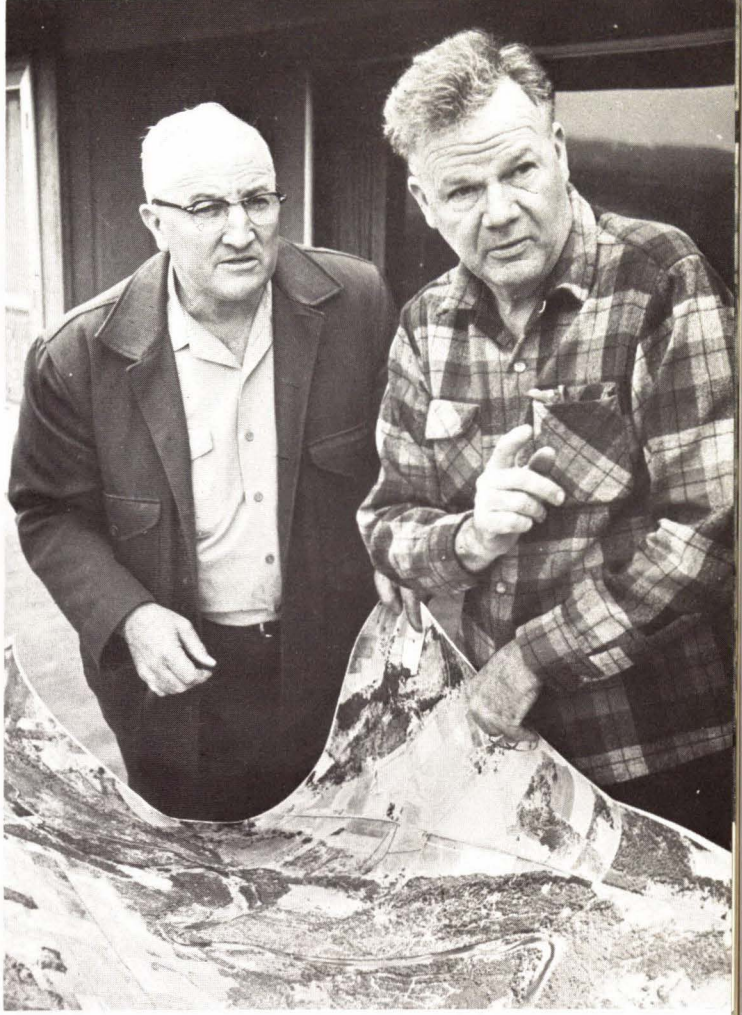
In the 20 years Parker has worked in Clackamas and Multnomah counties, he has seen a changing pattern of land use. Land that was clearcut has returned to timber. Other areas, once cropland, have been put into Christmas tree plantations. Recreational use of private land has increased many times. Organizational camps, pay-fishing ponds, private picnic areas, summer homes, and other types of recreation use have been growing in popularity. Parker's job to advise woodland owners about multiple use has thus become increasingly complex.

Farm Forestry is primarily a program of encouragement. Forest landowners are encouraged to practice sound forestry to make their land more productive. Advice includes what trees to plant, when to thin, when to harvest and other land management guidelines.

FARM FORESTRY ACCOMPLISHMENTS

Al Parker is one of the 16 Farm Foresters in the Pacific Northwest. Here is what they accomplished in Oregon and Washington in 1964:

Woodland owners served	5,291	
Area involved	173,339	acres
Stumpage value harvested	$503,151	
Area planted or seeded	1,661	acres
Timber stands thinned	6,388	acres
Timber stands pruned	1,883	acres
ACP requests served	1,594	
Miscellaneous requests served	1,928	



Al Parker discusses land use with a rural property owner, Barney Lucas. Planning the multiple use of resources on private lands is an important aspect of Parker's Farm forestry job.

Christmas trees are an important part of tree farm operations in Clackamas and Multnomah Counties. Here, Parker advises a landowner, Clyde Updegrave, on Christmas tree shearing.